

**Amendments to the Claims:**

- 1    1. (currently amended) A lift truck, load stabilization system for controlling ~~the tilt~~  
2    ~~angle of a lifting lift~~ mast ~~tilt angle, the mast~~ having a cargo support mounted to the  
3    mast and a tilt actuator for adjusting the mast tilt angle relative to the lift truck ~~frame~~,  
4    the system comprising:
- 5        a. an acceleration sensor mounted to the lift truck for sensing an the angular  
6        direction of a resultant of the forces of gravitational acceleration and vehicle  
7        travel acceleration; and
- 8        b. a negative feedback control system having
- 9            i. a feedback element input connected to the acceleration sensor for  
10           feedback of said resultant angular direction,
- 11           ii. a reference input storage for storing a value of angular direction  
12           representing the resultant angular direction of acceleration when the  
13           lift truck is at rest and the cargo support is horizontal; and
- 14           iii. an output connected to control said actuator for controllably varying  
15           the mast tilt angle and bringing the resultant angular direction into  
16           alignment with the stored reference angular direction.

- 1    2. (original) A lift truck system in accordance with claim 1 wherein the tilt actuator  
2    includes at least one double acting hydraulic cylinder actuator hydraulically connected to  
3    a bidirectional, proportional, hydraulic valve for controlling the hydraulic fluid flow to

4 the tilt actuator, the hydraulic valve having a control input linked to the output of the  
5 negative feedback control system for controlling the actuator to tilt the mast to a tilt angle  
6 within a smoothly continuous tilt angle range.

1 3. **(withdrawn)** A lift truck system in accordance with claim 2 wherein the control  
2 system comprises an analog proportional controller.

1 4. **(original)** A lift truck system in accordance with claim 2 wherein the control system  
2 comprises is a PID controller.

1 5. **(original)** A lift truck system in accordance with claim 2 wherein the hydraulic valve  
2 is electrically actuated.

1 6. **(withdrawn)** A method for adjusting the tilt angle of the load supporting surface  
2 of a lift truck, the method comprising: adjusting the tilt angle of the load supporting  
3 surface during lift truck operation to maintain the load supporting surface substantially  
4 perpendicular to the angular direction of the resultant of gravitational and travel  
5 acceleration.

1 7. **(withdrawn)** A method for adjusting the tilt angle of the load supporting surface of a  
2 lift truck, the method comprising:

- 3           a. storing the angular direction of gravitational acceleration upon the load  
4           supporting surface when the lift truck is at rest and the load supporting surface  
5           is substantially horizontal;  
6           b. sensing the resultant angular direction of gravitational and travel acceleration  
7           during lift truck operation; and  
8           c. tilting the load supporting surface through the angular difference of said  
9           angular directions to align the load supporting surface substantially  
10          perpendicular to the resultant angular direction.

- 1   8. (withdrawn) A method in accordance with claim 7 wherein the storing step is  
2   performed by positioning the lift truck at rest with the load supporting surface  
3   substantially horizontal and storing a sensed angular direction of gravitational force.